Serial Number: 09/893,036 Filing Date: June 27, 2001

Title: FLEXIBLE TAPE ELECTRONICS PACKAGING

Assignee: Intel Corporation

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IN THE CLAIMS

Please amend the claims as follows:

1-16. (Canceled)

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17. (Currently Amended) An electronic package substrate comprising:

a thin, flexible, electrically insulating film <u>including having</u> a conductor region to mount an integrated circuit and <u>further including at least one sprocket hole in the film, outside the conductor region;</u>

a plurality of traces within the film, including within the conductor region;

a plurality of lands on a surface of the film and coupled to the traces, wherein the lands are to mount corresponding pads of the integrated circuit in a ball grid array; and

wherein the film comprises a plurality of contiguous layers, selected ones of which comprise a plurality of traces, and wherein the film comprises one or more vias coupled to corresponding ones of the traces.

18. (Original) The electronic package substrate recited in claim 17, wherein the film is formed of material from the group comprising a polymeric film, polyimide, polyester, polyparabanic acid, epoxy, and fiberglass.

19-20. (Canceled)

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21. (Currently Amended) An electronic package comprising:

a package substrate including

a thin, flexible, electrically insulating film <u>including</u> having a conductor region to mount an integrated circuit;

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a plurality of traces, at least some of which are within the conductor region; one or more vias within the film and coupled to corresponding ones of the traces; and

a plurality of lands on a surface of the film and coupled to the traces, the plurality of lands including a plurality of signal lands around the periphery of the conductor region, the plurality of lands further including a plurality of power and ground lands within a central core region of the conductor region; and

an integrated circuit <u>including</u> having a plurality of pads coupled to the plurality of lands in a ball grid array.

- 22. (Previously Presented) The electronic package recited in claim 21, wherein the film is formed of material selected from the group consisting of a polymeric film, polyimide, polyester, polyparabanic acid, epoxy, and fiberglass.
- 23. (Currently Amended) The electronic package recited in claim 21, wherein the film comprises a plurality of layers, each of the layers comprising a plurality of traces in the conductor region, and wherein each layer has a thickness within the range of approximately .15 to .30 millimeters.

24-25. (Canceled)

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26. (Currently Amended) An electronic system <u>including</u> at least one electronic assembly comprising:

a thin, flexible, electrically insulating film <u>including having</u> a conductor region, a plurality of traces in the conductor region, and a plurality of lands formed directly upon a surface of the film and coupled to the traces, the plurality of lands including a plurality of signal lands around the periphery of the conductor region, the plurality of lands further including a plurality of power and ground lands within a central core region of the conductor region;

an integrated circuit <u>including</u> having a plurality of pads coupled to the plurality of lands in a ball grid array; and

wherein the film comprises a plurality of contiguous layers, selected ones of which comprise a plurality of traces in the conductor region, and wherein the film comprises one or more vias coupled to corresponding ones of the traces.

27. (Previously Presented) The electronic system recited in claim 26, wherein the film is formed of material selected from the group consisting of a polymeric film, polyimide, polyester, polyparabanic acid, epoxy, and fiberglass.

28-30. (Canceled)



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31. (Currently Amended) A data processing system comprising:

a bus coupling components in the data processing system;

a display coupled to the bus;

a memory coupled to the bus; and

a processor coupled to the bus and comprising an electronic assembly including,

a thin, flexible, electrically insulating film <u>including</u> having a conductor region, a plurality of traces in the conductor region, one or more vias coupled to corresponding ones of the traces, and a plurality of lands formed directly upon a surface of the film and coupled to the traces, the plurality of lands including a plurality of signal lands around the periphery of the conductor region, the plurality of lands further including a plurality of power and ground lands within a central core region of the conductor region; and

an integrated circuit <u>including</u> having a plurality of pads coupled to the plurality of lands in a ball grid array.

- 32. (Previously Presented) The data processing system recited in claim 31, wherein the film is formed of material selected from the group consisting of a polymeric film, polyimide, polyester, polyparabanic acid, epoxy, and fiberglass.
- 33. (Currently Amended) The data processing system recited in claim 31, wherein the film comprises a plurality of layers, each of the layers comprising a plurality of traces in the conductor region.

34-35. (Canceled)

36. (Currently Amended) The electronic package substrate recited in claim 17, wherein the one or more vias couple traces within <u>selected different</u> layers.

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37. (Currently Amended) A package substrate comprising:

a thin, flexible, electrically insulating film <u>including</u> having a conductor region to mount an integrated circuit;

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a plurality of traces, at least some of which are within the conductor region; one or more vias within the film and coupled to corresponding ones of the traces; and a plurality of lands on a surface of the film and coupled to the traces, wherein the lands are to mount corresponding pads of the integrated circuit, the plurality of lands including a plurality of signal lands around the periphery of the conductor region, the plurality of lands further including a plurality of power and ground lands within a central core region of the conductor region.

- 38. (Previously Presented) The package substrate recited in claim 37, wherein the film is formed of material selected from the group consisting of a polymeric film, polyimide, polyester, polyparabanic acid, epoxy, and fiberglass.
- 39. (Currently Amended) The package substrate recited in claim 37, wherein the film comprises a plurality of layers, each of the layers comprising a plurality of traces.
- 40. (Currently Amended) The package substrate recited in claim 39, wherein the one or more vias couple traces within <u>selected different</u> layers.
- 41. (Canceled)
- 42. (Currently amended) The electronic package recited in claim 21, wherein the film comprises a plurality of contiguous layers, selected ones of which layers comprise selected ones of the plurality of traces, and wherein selected ones of the one or more vias couple traces within selected different layers.
- 43. (Canceled)

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44. (Currently Amended) The electronic system recited in claim 26, wherein the one or more vias couple traces within <u>selected</u> <u>different</u> layers.



45. (Canceled)

46. (Currently Amended) The data processing system recited in claim 33, wherein the one or more vias couple traces within <u>selected different</u> layers.